

# PCT

## REQUEST

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

For receiving Office use only

International Application No.

International Filing Date

Name of receiving Office and "PCT International Application"

Applicant's or agent's file reference  
(if desired) (12 characters maximum) 1182

### Box No. I TITLE OF INVENTION

PROCESS FOR PRODUCING HMG-CoA REDUCTASE INHIBITOR

### Box No. II APPLICANT

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

KYOWA HAKKO KOGYO CO., LTD.  
6-1, Ohtemachi 1-chome,  
Chiyoda-ku, Tokyo 100-8185 Japan

☐ This person is also inventor.

Telephone No. 03-3282-0036

Facsimile No. 03-3282-1527

Teleprinter No.

State (i.e. country) of nationality: JAPAN

State (i.e. country) of residence: JAPAN

This person is applicant for the purposes of: ☐ all designated States ☒ all designated States except the United States of America ☐ the United States of America only ☐ the States indicated in the Supplemental Box

### Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (i.e. country) of residence if no State of residence is indicated below.)

ENDO Hirofumi  
c/o Head Office, KYOWA HAKKO KOGYO CO., LTD.  
6-1, Ohtemachi 1-chome, Chiyoda-ku,  
Tokyo 100-8185 Japan

This person is:

☐ applicant only

☒ applicant and inventor

☐ inventor only (If this check-box is marked, do not fill in below.)

State (i.e. country) of nationality: JAPAN

State (i.e. country) of residence: JAPAN

This person is applicant for the purposes of: ☐ all designated States ☐ all designated States except the United States of America ☒ the United States of America only ☐ the States indicated in the Supplemental Box

☒ Further applicants and/or (further) inventors are indicated on a continuation sheet.

### Box No. IV AGENT OR COMMON REPRESENTATIVE; OR ADDRESS FOR CORRESPONDENCE

The person identified below is hereby/has been appointed to act on behalf of the applicant(s) before the competent International Authorities as:

☐ agent

☐ common representative

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)

Telephone No.

Facsimile No.

Teleprinter No.

☐ Mark this check-box where no agent or common representative is/has been appointed and the space above is used instead to indicate a special address to which correspondence should be sent.

## Continuation of Box No. III FURTHER APPLICANT(S) AND/OR (FURTHER) INVENTOR(S)

If none of the following sub-boxes is used, this sheet should not be included in the request.

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

YONETANI Yoshiyuki  
c/o Tokyo Research Laboratories,  
KYOWA HAKKO KOGYO CO., LTD.  
6-6, Asahi-machi 3-chome, Machida-shi,  
Tokyo 194-8533 Japan

This person is:

☐ applicant only☒ applicant and inventor☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JAPAN

State (that is, country) of residence:

JAPAN

This person is applicant for the purposes of:

☐ all designated States☐ all designated States except the United States of America☒ the United States of America only☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

MIZOGUCHI Hiroshi  
c/o Tokyo Research Laboratories  
KYOWA HAKKO KOGYO CO., LTD.  
6-6, Asahi-machi 3-chome, Machida-shi,  
Tokyo 194-8533 Japan

This person is:

☐ applicant only☒ applicant and inventor☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JAPAN

State (that is, country) of residence:

JAPAN

This person is applicant for the purposes of:

☐ all designated States☐ all designated States except the United States of America☐ the United States of America only☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

HASHIMOTO Shin-ichi  
c/o Tokyo Research Laboratories,  
KYOWA HAKKO KOGYO CO., LTD.  
6-6, Asahi-machi 3-chome, Machida-shi,  
Tokyo 194-8533 Japan

This person is:

☐ applicant only☒ applicant and inventor☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JAPAN

State (that is, country) of residence:

JAPAN

This person is applicant for the purposes of:

☐ all designated States☐ all designated States except the United States of America☒ the United States of America only☐ the States indicated in the Supplemental Box

Name and address: (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below.)

OZAKI Akio  
c/o Technical Research Laboratories  
KYOWA HAKKO KOGYO CO., LTD.  
1-1, Kyowa-cho, Hofu-shi, Yamaguchi 747-8522  
Japan

This person is:

☐ applicant only☒ applicant and inventor☐ inventor only (If this check-box is marked, do not fill in below.)

State (that is, country) of nationality:

JAPAN

State (that is, country) of residence:

JAPAN

This person is applicant for the purposes of:

☐ all designated States☐ all designated States except the United States of America☒ the United States of America only☐ the States indicated in the Supplemental Box☐ Further applicants and/or (further) inventors are indicated on another continuation sheet.

## Box No. V DESIGNATION STATES

The following designations are hereby made under Rule 4.9(a) mark the applicable check-boxes; at least one must be marked:

## Regional Patent

- ☒ AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, SD Sudan, SL Sierra Leone, SZ Swaziland, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT
- ☒ EA Eurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT
- ☒ EP European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent Convention and of the PCT
- ☒ OA OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT; if other kind of protection or treatment desired, specify on dotted line:
- GW Guinea-Bissau**

## National Patent (if other kind of protection or treatment desired, specify on dotted line):

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> AE United Arab Emirates                 | <input checked="" type="checkbox"/> LS Lesotho                                   |
| <input checked="" type="checkbox"/> AL Albania                              | <input checked="" type="checkbox"/> LT Lithuania                                 |
| <input checked="" type="checkbox"/> AM Armenia                              | <input checked="" type="checkbox"/> LU Luxembourg                                |
| <input checked="" type="checkbox"/> AT Austria                              | <input checked="" type="checkbox"/> LV Latvia                                    |
| <input checked="" type="checkbox"/> AU Australia                            | <input checked="" type="checkbox"/> MD Republic of Moldova                       |
| <input checked="" type="checkbox"/> AZ Azerbaijan                           | <input checked="" type="checkbox"/> MG Madagascar                                |
| <input checked="" type="checkbox"/> BA Bosnia and Herzegovina               | <input checked="" type="checkbox"/> MK The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> BB Barbados                             | <input type="checkbox"/> MN Mongolia   |
| <input checked="" type="checkbox"/> BG Bulgaria                             | <input checked="" type="checkbox"/> MW Malawi                                    |
| <input checked="" type="checkbox"/> BR Brazil                               | <input checked="" type="checkbox"/> MX Mexico                                    |
| <input checked="" type="checkbox"/> BY Belarus                              | <input checked="" type="checkbox"/> NO Norway                                    |
| <input checked="" type="checkbox"/> CA Canada                               | <input checked="" type="checkbox"/> NZ New Zealand                               |
| <input checked="" type="checkbox"/> CH and LI Switzerland and Liechtenstein | <input checked="" type="checkbox"/> PL Poland                                    |
| <input checked="" type="checkbox"/> CN China                                | <input checked="" type="checkbox"/> PT Portugal                                  |
| <input checked="" type="checkbox"/> CU Cuba                                 | <input checked="" type="checkbox"/> RO Romania                                   |
| <input checked="" type="checkbox"/> CZ Czech Republic                       | <input checked="" type="checkbox"/> RU Russian Federation                        |
| <input checked="" type="checkbox"/> DE Germany                              | <input checked="" type="checkbox"/> SD Sudan                                     |
| <input checked="" type="checkbox"/> DK Denmark                              | <input checked="" type="checkbox"/> SE Sweden                                    |
| <input checked="" type="checkbox"/> EE Estonia                              | <input checked="" type="checkbox"/> SG Singapore                                 |
| <input checked="" type="checkbox"/> ES Spain                                | <input checked="" type="checkbox"/> SI Slovenia                                  |
| <input checked="" type="checkbox"/> FI Finland                              | <input checked="" type="checkbox"/> SK Slovakia                                  |
| <input checked="" type="checkbox"/> GB United Kingdom                       | <input checked="" type="checkbox"/> SL Sierra Leone                              |
| <input checked="" type="checkbox"/> GD Grenada                              | <input checked="" type="checkbox"/> TJ Tajikistan                                |
| <input checked="" type="checkbox"/> GE Georgia                              | <input checked="" type="checkbox"/> TM Turkmenistan                              |
| <input checked="" type="checkbox"/> GH Ghana                                | <input checked="" type="checkbox"/> TR Turkey                                    |
| <input checked="" type="checkbox"/> GM Gambia                               | <input checked="" type="checkbox"/> TT Trinidad and Tobago                       |
| <input checked="" type="checkbox"/> HR Croatia                              | <input checked="" type="checkbox"/> UA Ukraine                                   |
| <input checked="" type="checkbox"/> HU Hungary                              | <input checked="" type="checkbox"/> UG Uganda                                    |
| <input checked="" type="checkbox"/> ID Indonesia                            | <input checked="" type="checkbox"/> US United States of America                  |
| <input checked="" type="checkbox"/> IL Israel                               | <input type="checkbox"/> UZ Uzbekistan   |
| <input checked="" type="checkbox"/> IN India                                | <input checked="" type="checkbox"/> VN Viet Nam                                  |
| <input checked="" type="checkbox"/> IS Iceland                              | <input checked="" type="checkbox"/> YU Yugoslavia                                |
| <input checked="" type="checkbox"/> JP Japan                                | <input checked="" type="checkbox"/> ZA South Africa                              |
| <input checked="" type="checkbox"/> KE Kenya                                | <input checked="" type="checkbox"/> ZW Zimbabwe                                  |
| <input type="checkbox"/> KP Democratic People's Republic of Korea           |  |
| <input checked="" type="checkbox"/> KR Republic of Korea                    |  |
| <input checked="" type="checkbox"/> KZ Kazakhstan                           |  |
| <input checked="" type="checkbox"/> LC Saint Lucia                          | <input checked="" type="checkbox"/> CR Costa Rica                                |
| <input checked="" type="checkbox"/> LK Sri Lanka                            | <input checked="" type="checkbox"/> DM Dominica                                  |
| <input checked="" type="checkbox"/> LR Liberia                              | <input checked="" type="checkbox"/> TZ Tanzania                                  |
|   | <input type="checkbox"/> MA Morocco  |

Check-boxes reserved for designating States for the purposes of a national patent which have become party to the PCT after issuance of this sheet:

**Precautionary Designation Statement:** In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. Confirmation of a designation consists of the filing of a notice specifying that designation and the payment of the designation and confirmation fees. Confirmation must reach the receiving Office within the 15-month time limit.

Box No. VI PRIORITY CLAIM				
<input type="checkbox"/> Further priority claims are indicated in the Supplemental Box.				
Filing date of earlier application (day/month/year)	Number of earlier application	Where earlier application is:		
		national application: country	regional application:* regional Office	international application: receiving Office
item (1) 29/01/1999	Patent Application 11-21707	JAPAN		
item (2)				
item (3)				

☒ The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s): (1)

\* Where the earlier application is an ARIPO application, it is mandatory to indicate in the Supplemental Box at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed (Rule 4.10(b)(ii)). See Supplemental Box.

## Box No. VII INTERNATIONAL SEARCHING AUTHORITY

Choice of International Searching Authority (ISA)  
(if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):

ISA / JP

Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):

Date (day/month/year)

Number

Country (or regional Office)

## Box No. VIII CHECK LIST; LANGUAGE OF FILING

This international application contains the following number of sheets:

request : 4  
description (excluding  
sequence listing part) : 51  
claims : 10  
abstract : 1  
drawings : 0  
sequence listing part  
of description : 44

Total number of sheets : 110

This international application is accompanied by the item(s) marked below:

1. ☒ fee calculation sheet
2. ☐ separate signed power of attorney
3. ☐ copy of general power of attorney; reference number, if any:
4. ☐ statement explaining lack of signature
5. ☐ priority document(s) identified in Box No. VI as item(s):
6. ☐ translation of international application into (language):
7. ☐ separate indications concerning deposited microorganism or other biological material
8. ☒ nucleotide and/or amino acid sequence listing in computer readable form
9. ☒ other (specify): such as recording form of flexible disk

Figure of the drawings which  
should accompany the abstract:

Language of filing of the  
international application:

Japanese

## Box No. IX SIGNATURE OF APPLICANT OR AGENT

Next to each signature, indicate the name of the person signing and the capacity in which the person signs (if such capacity is not obvious from reading the request).

KYOWA HAKKO KOGYO CO., LTD.

YONETANI Yoshiyuki

HASHIMOTO Shin-ichi

ENDO Hirofumi

MIZOGUCHI Hiroshi

OZAKI Akio

For receiving Office use only		2. Drawings:  <input type="checkbox"/> received:  <input type="checkbox"/> not received:
1. Date of actual receipt of the purported international application:		
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:		
4. Date of timely receipt of the required corrections under PCT Article 11(2):		
5. International Searching Authority (if two or more are competent): ISA / JP	6. <input type="checkbox"/> Transmittal of search copy delayed until search fee is paid.	

For International Bureau use only  
Date of receipt of the record copy  
by the International Bureau:

# PCT

## FEE CALCULATION SHEET Annex to the Request

For receiving Office use only

International application No.

Date stamp of the receiving Office

Applicant's or agent's  
file reference 1182

Applicant

KYOWA HAKKO KOGYO CO., LTD.

### CALCULATION OF PRESCRIBED FEES

1. TRANSMITTAL FEE . . . . . 95,000 (T+S) T
2. SEARCH FEE . . . . . S

International search to be carried out by \_\_\_\_\_  
(If two or more International Searching Authorities are competent in relation to the international application, indicate the name of the Authority which is chosen to carry out the international search.)

### 3. INTERNATIONAL FEE

#### Basic Fee

The international application contains 110 sheets.

first 30 sheets . . . . . 46,000 b1

80 x 1,100 = 88,000 b2

remaining sheets additional amount

Add amounts entered at b1 and b2 and enter total at B . . . . . 134,000 B

#### Designation Fees

The international application contains 82 designations.

8 x 9,900 = 79,200 D

number of designation fees amount of designation fee payable (maximum 11)

Add amounts entered at B and D and enter total at I . . . . . 213,200 I

(Applicants from certain States are entitled to a reduction of 75% of the international fee. Where the applicant is (or all applicants are) so entitled, the total to be entered at I is 25% of the sum of the amounts entered at B and D.)

4. FEE FOR PRIORITY DOCUMENT (if applicable) . . . . . P

5. TOTAL FEES PAYABLE . . . . . 308,200

Add amounts entered at T, S, I and P, and enter total in the TOTAL box

TOTAL

☐ The designation fees are not paid at this time.

### MODE OF PAYMENT

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> authorization to charge deposit account (see below) | <input type="checkbox"/> bank draft     | <input type="checkbox"/> coupons          |
| <input type="checkbox"/> cheque  | <input type="checkbox"/> cash           | <input type="checkbox"/> other (specify): |
| <input type="checkbox"/> postal money order                                  | <input type="checkbox"/> revenue stamps |   |

### DEPOSIT ACCOUNT AUTHORIZATION (this mode of payment may not be available at all receiving Offices)

- The RO/ ☐ is hereby authorized to charge the total fees indicated above to my deposit account.
- ☐ is hereby authorized to charge any deficiency or credit any overpayment in the total fees indicated above to my deposit account.
- ☐ is hereby authorized to charge the fee for preparation and transmittal of the priority document to the International Bureau of WIPO to my deposit account.

Deposit Account No.

Date (day, month, year)

Signature

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP00/00472

## A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl<sup>7</sup> C12N9/02, 1/21, 15/53, C12P7/62, 17/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl<sup>7</sup> C12N9/00-9/02, 15/52-15/53

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
GenBank/EMBL/DDBJ/GeneSeq, SwissProt/PIR/GeneSeq,  
BIOSIS (DIALOG), WPI (DIALOG)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Nature, Volume 390, issued November 20, 1997, F. Kunst et al., "The complete genome sequence of the Gram-positive bacterium <i>Bacillus subtilis</i> ", pages 249-256 & Database GenBank Accession No.B69851	1-24,39
X	Microbiology, Volume 144, Part 4, issued April 1998, Cario Rivolta et al., "A 35.7 kb DNA fragment from the <i>Bacillus subtilis</i> chromosome containing a putative 12.3 kb operon involved in hexuronate catabolism and a perfectly symmetrical hypothetical catabolite-responsive element", pages 877-884 & Database GenBank Accession No.AF015825	1-24,39
A	EP, 649907, A1 (BRISTOL-MYERS SQUIBB COMPANY), 26 April, 1995 (26.04.95) & HU, 217104, B & AU, 9475972, A & FI, 9404926, A & CA, 2134025, A & JP, 7-184670, A & CN, 1106067, A & IL, 111084, A & SG, 47504, A1	1-39

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  
27 April, 2000 (27.04.00)Date of mailing of the international search report  
16 May, 2000 (16.05.00)Name and mailing address of the ISA/  
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP00/00472

## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP, 64-2585, A (SANKYO COMPANY, LIMITED), 06 January, 1989 (06.01.89) (Family: none)	1-39
A	Cardiology, Volume 77, Supplement 4, issued October 1990, Alfred W. Alberts, "Lovastatin and Simvastatin - Inhibitors of HMG CoA Reductase and Cholesterol Biosynthesis", pages 14-21	1-39
A	The Journal of Antibiotics, Volume 29, Number 12, issued December 1976, Akira Endo et al., "ML-236A, ML-236B, AND ML-236C, NEW INHIBITORS OF CHOLESTEROGENESIS PRODUCED BY PENICILLIUM CITRINUM", pages 1346-1348	1-39

## A. 発明の属する分野の分類 (国際特許分類 (IPC))

Int. Cl<sup>7</sup> C12N9/02, 1/21, 15/53, C12P7/62, 17/06

## B. 調査を行った分野

調査を行った最小限資料 (国際特許分類 (IPC))

Int. Cl<sup>7</sup> C12N9/00-9/02, 15/52-15/53

最小限資料以外の資料で調査を行った分野に含まれるもの

国際調査で使用了電子データベース (データベースの名称、調査に使用した用語)

GenBank/EMBL/DDBJ/GeneSeq, SwissProt/PIR/GeneSeq,  
BIOSIS (DIALOG), WPI (DIALOG)

## C. 関連すると認められる文献

引用文献の カテゴリー*	引用文献名 及び一部の箇所が関連するときは、その関連する箇所の表示	関連する 請求の範囲の番号
X	Nature, Volume 390, issued November 20, 1997, F. Kunst et al., "The complete genome sequence of the Gram-positive bacterium <i>Bacillus subtilis</i> ", pages 249-256 & Database GenBank Accession No. B69851	1-24, 39
X	Microbiology, Volume 144, Part 4, issued April 1998, Cario Rivolta et al., "A 35.7 kb DNA fragment from the <i>Bacillus subtilis</i> chromosome containing a putative 12.3 kb operon involved in hexuronate catabolism and a perfectly	1-24, 39

☒ C欄の続きにも文献が列举されている。☐ パテントファミリーに関する別紙を参照。

## \* 引用文献のカテゴリー

「A」特に関連のある文献ではなく、一般的技術水準を示すもの

「E」国際出願日前の出願または特許であるが、国際出願日以後に公表されたもの

「L」優先権主張に疑義を提起する文献又は他の文献の発行日若しくは他の特別な理由を確立するために引用する文献 (理由を付す)

「O」口頭による開示、使用、展示等に言及する文献

「P」国際出願日前で、かつ優先権の主張の基礎となる出願

の日の後に公表された文献

「T」国際出願日又は優先日後に公表された文献であって出願と矛盾するものではなく、発明の原理又は理論の理解のために引用するもの

「X」特に関連のある文献であって、当該文献のみで発明の新規性又は進歩性がないと考えられるもの

「Y」特に関連のある文献であって、当該文献と他の1以上の文献との、当業者にとって自明である組合せによって進歩性がないと考えられるもの

「&amp;」同一パテントファミリー文献

国際調査を完了した日

27.04.00

国際調査報告の発送日

16.05.00

国際調査機関の名称及びあて先

日本国特許庁 (ISA/JP)

郵便番号100-8915

東京都千代田区霞が関三丁目4番3号

特許庁審査官 (権限のある職員)

内田 俊生

印

4N

8214

電話番号 03-3581-1101 内線 3488



RECEIVED

OCT 10 2000

I.P. DEPT.

PCT

## PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

To:

KYOWA HAKKO KOGYO CO., LTD.  
6-1, Ohtemachi 1-chome  
Chiyoda-ku  
Tokyo 100-8185  
JAPON

INFORMATION CONCERNING ELECTED  
OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

Date of mailing (day/month/year) 28 September 2000 (28.09.00)		
Applicant's or agent's file reference 1182		IMPORTANT INFORMATION
International application No. PCT/JP00/00472	International filing date (day/month/year) 28 January 2000 (28.01.00)	
		Priority date (day/month/year) 29 January 1999 (29.01.99)
Applicant KYOWA HAKKO KOGYO CO., LTD. et al		

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

AP : GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW

EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

National : AU, BG, CA, CN, CZ, DE, IL, JP, KR, MN, NO, NZ, PL, RO, RU, SE, SK, US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

National : AE, AL, AM, AT, AZ, BA, BB, BR, BY, CH, CR, CU, DK, DM, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IN, IS, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MW, MX, PT, SD,  
SG, SI, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW

3. The applicant is reminded that he must enter the "national phase" **before the expiration of 30 months from the priority date** before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

The entry into the European regional phase is postponed **until 31 months from the priority date** for all States designated for the purposes of obtaining a European patent.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer:

Diana Nissen

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

# PCT

WO 00/44886  
PCT/JP00/00472

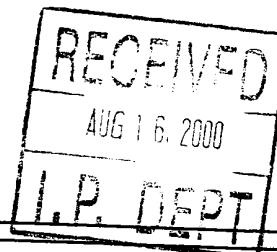
From the INTERNATIONAL BUREAU

PCT

## NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

To:  
KYOWA HAKKO KOGYO CO., LTD.  
6-1, Ohtemachi 1-chome  
Chiyoda-ku  
Tokyo 100-8185  
JAPON



WPCTD

PLP JD

Date of mailing (day/month/year) 03 August 2000 (03.08.00)		
Applicant's or agent's file reference 1182		
<b>IMPORTANT NOTICE</b>		
International application No. PCT/JP00/00472	International filing date (day/month/year) 28 January 2000 (28.01.00)	Priority date (day/month/year) 29 January 1999 (29.01.99)
Applicant KYOWA HAKKO KOGYO CO., LTD. et al		

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:  
AU,JP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:  
AE,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CN,CR,CU,CZ,DE,DK,DM,EA,EE,EP,ES,FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,MN,MW,MX,NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,ZA,ZW  
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the international application as published by the International Bureau on 03 August 2000 (03.08.00) under No. WO 00/44886

### REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a **demand for international preliminary examination** must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

### REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

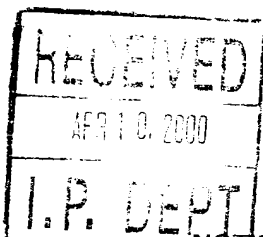
If the applicant wishes to proceed with the international application in the **national phase**, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer  J. Zahra
Facsimile No. (41-22) 740.14.35	Telephone No. (41-22) 338.83.38

Form PCT/IB/308 (July 1996)

3433532



## PATENT COOPERATION TREATY

WPBTD

PCT

From the INTERNATIONAL BUREAU

To:

KYOWA HAKKO KOGYO CO., LTD.  
6-1, Ohtemachi 1-chome  
Chiyoda-ku  
Tokyo 100-8185  
JAPON

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

Date of mailing (day/month/year) 28 March 2000 (28.03.00)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference 1182	
International application No. PCT/JP00/00472	
International publication date (day/month/year) Not yet published	
Applicant KYOWA HAKKO KOGYO CO., LTD. et al	International filing date (day/month/year) 28 January 2000 (28.01.00)  Priority date (day/month/year) 29 January 1999 (29.01.99)

1. The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
2. This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
3. An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
4. The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
29 Janu 1999 (29.01.99)	11/21707	JP	17 Marc 2000 (17.03.00)

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

Taïeb Akremi T

Telephone No. (41-22) 338.83.38

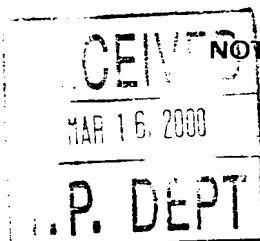
## PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

To:

KYOWA HAKKO KOGYO CO., LTD.  
6-1, Ohtemachi 1-chome  
Chiyoda-ku  
Tokyo 100-8185  
JAPON

NOTIFICATION OF RECEIPT OF  
RECORD COPY

(PCT Rule 24.2(a))

WPAJD

<b>Date of mailing</b> (day/month/year) 22 February 2000 (22.02.00)	<b>IMPORTANT NOTIFICATION</b>
<b>Applicant's or agent's file reference</b> 1182	<b>International application No.</b> PCT/JP00/00472

The applicant is hereby notified that the International Bureau has received the record copy of the international application as detailed below.

Name(s) of the applicant(s) and State(s) for which they are applicants:

KYOWA HAKKO KOGYO CO., LTD. (for all designated States except US)  
ENDO, Hirofumi et al (for US)

International filing date : 28 January 2000 (28.01.00)

Priority date(s) claimed : 29 January 1999 (29.01.99)

Date of receipt of the record copy  
by the International Bureau : 14 February 2000 (14.02.00)

List of designated Offices :

AP : GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

National : AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB,

GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,

MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW

## ATTENTION

The applicant should carefully check the data appearing in this Notification. In case of any discrepancy between these data and the indications in the international application, the applicant should immediately inform the International Bureau.

In addition, the applicant's attention is drawn to the information contained in the Annex, relating to:

- ☒ time limits for entry into the national phase  
☒ confirmation of precautionary designations  
☒ requirements regarding priority documents

A copy of this Notification is being sent to the receiving Office and to the International Searching Authority.

The International Bureau of WIPO  
34, chemin des Colombettes  
1211 Geneva 20, Switzerland

Authorized officer:

Susumu Kubo

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

## TENT COOPERATION TRE. /

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents  
United States Patent and Trademark  
Office  
Box PCT  
Washington, D.C. 20231  
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 28 September 2000 (28.09.00)	
<b>International application No.</b> PCT/JP00/00472	<b>Applicant's or agent's file reference</b> 1182
<b>International filing date</b> (day/month/year) 28 January 2000 (28.01.00)	<b>Priority date</b> (day/month/year) 29 January 1999 (29.01.99)
<b>Applicant</b> ENDO, Hirofumi et al	

1. The designated Office is hereby notified of its election made:

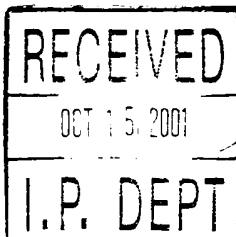
☒ in the demand filed with the International Preliminary Examining Authority on:

18 August 2000 (18.08.00)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

<b>The International Bureau of WIPO</b> 34, chemin des Colombettes 1211 Geneva 20, Switzerland	<b>Authorized officer</b>  Diana Nissen
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38



## PATENT COOPERATION TREATY

PCT

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

KYOWA HAKKO KOGYO CO., LTD.  
6-1, Ohtemachi 1-chome  
Chiyoda-ku  
Tokyo 100-8185  
JAPON

Date of mailing (day/month/year) 01 October 2001 (01.10.01)	
Applicant's or agent's file reference 1182	<b>IMPORTANT NOTIFICATION</b>
International application No. PCT/JP00/00472	International filing date (day/month/year) 28 January 2000 (28.01.00)
Applicant KYOWA HAKKO KOGYO CO., LTD. et al	

**1. Transmittal of the translation to the applicant.**

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

**2. Transmittal of the copy of the translation to the elected Offices.**

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

EP, AT, AU, CA, CH, CN, CZ, FI, NO, NZ, PL, RO, RU, SK, US

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AP, EA, AE, AL, AM, AZ, BA, BB, BG, BR, BY, CR, CU, DE, DK, DM, EE, ES, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, PT, SD, SE, SG, SI, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, OA

**3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).**

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. (41-22) 740.14.35	Authorized officer  Elliott PERETTI  Telephone No. (41-22) 336.83.38
--	--

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1182	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/JP00/00472	International filing date (day/month/year) 28 January 2000 (28.01.00)	Priority date (day/month/year) 29 January 1999 (29.01.99)
International Patent Classification (IPC) or national classification and IPC C12N 9/02, 1/21, 15/53, C12P 7/62, 17/06		
Applicant KYOWA HAKKO KOGYO CO., LTD.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of \_\_\_\_\_ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 18 August 2000 (18.08.00)	Date of completion of this report 19 April 2001 (19.04.2001)
Name and mailing address of the IPEA/IP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

international application No.

PCT/JP00/00472

## I. Basis of the report

### 1. With regard to the elements of the international application:\*\*

- ☒ the international application as originally filed
- ☐ the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the claims:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the drawings:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☒ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets fig \_\_\_\_\_

### 5. ☐ This report has been established as if some of the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box Rule 70.2(c).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT JP00/00472

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability:  
citations and explanations supporting such statement

## 1. Statement:

Novelty (N)	Claims	1-39	YES
	Claims		NO
Inventive step (IS)	Claims	25-37	YES
	Claims	1-24, 38, 39	NO
Industrial applicability (IA)	Claims	1-39	YES
	Claims		NO

## 2. Citations and explanations

Document 1: "The complete genome sequence of the Gram-positive bacterium *Bacillus subtilis*," F. Kunst et al., Nature, 20 November, 1997, Vol. 390, pages 249-256  
Document 2: "A 35.7 kb DNA fragment from the *Bacillus subtilis* chromosome containing a putative 12.3 kb operon involved in hexuronate catabolism and a perfectly symmetrical hypothetical catabolite-responsive element," Carlo Rivolta et al., Microbiology, April 1998, Vol. 144, Part 4, pages 877-884  
Document 3: EP, 649907, A1 (Bristol-Myers Squibb Co.), 26 April, 1995 (26.04.95)

### Claims 1-24 and 38

The subject matters of claims 1-24 and 38 do not appear to involve an inventive step in view of document 1 or 2 cited in the ISR.

Since the "yjiB" (a base sequence from No. 96423 to No. 97613 of GenBank Accession No. Z99110) described in document 1 or the "YjiB" (a base sequence from No. 10583 to No. 11773 of GenBank Accession No. AF015825) described in document 2 is identical with the sequence described in SEQ ID NO: 2 of the present international application, a DNA consisting of such a sequence, DNAs hybridized with said DNA, recombinant vectors containing any of these DNAs, proteins encoded by these DNAs, transformants having any of these recombinant vectors introduced, and a method of producing a protein used for culturing any of the transformants are obvious to a person skilled in the art.

### Claim 39

The subject matter of claim 39 does not appear to involve an inventive step in view of document 1 or 2. A partial sequence of the base sequence publicly known due to document 1 or 2 is obvious to a person skilled in the art.

### Claims 25-37

The subject matters of claims 25-37 appear to be novel and to involve an inventive step in view of document 1 or 2, and document 3 also cited in the ISR.

The base sequence described in SEQ ID NO: 2 of the present international application is obvious from the description of document 1 or 2, but the documents do not describe particularly what reaction the protein encoded by the base sequence catalyzes. This is not obvious to a person skilled in the art either. Furthermore, document 3 describes a method of using a fungus for producing the same intended product from the same raw materials as those in the method of producing an HMG-CoA reductase inhibitor of the present international application, but does not disclose particularly any enzyme (protein) for catalyzing the reaction or any DNA encoding it. These are not obvious to a person skilled in the art either.

特許協力条約に基づく国際出願

願 書

出願人は、この国際出願が特許協力条約に従って処理されることを請求する。

国際出願番号

国際出願日

(受付印)

出願人又は代理人の書類記号  
(希望する場合、最大12字)

1182



第 I 欄 発明の名称

HMG-CoA レダクターゼ阻害剤の製造法

第 II 欄 出願人

氏名(名称)及びあて名：(姓・名の順に記載；法人は公式の完全な名称を記載；あて名は郵便番号及び国名も記載)

協和醸酵工業株式会社  
KYOWA HAKKO KOGYO CO., LTD.  
〒100-8185 日本国東京都千代田区大手町一丁目6番1号  
6-1, Ohtemachi 1-chome, Chiyoda-ku, Tokyo 100-8185 Japan

☐ この欄に記載した者は、  
発明者でもある。

電話番号：  
03-3282-0036

ファクシミリ番号：  
03-3282-1527

加入電信番号：

国籍(国名)： 日本国 JP

住所(国名)： 日本国 JP

この欄に記載した者は、次の  
指定国についての出願人である：  
☐ すべての指定国 ☒ 米国を除くすべての指定国 ☐ 米国のみ ☐ 追記欄に記載した指定国

第 III 欄 その他(出願人又は発明者)

氏名(名称)及びあて名：(姓・名の順に記載；法人は公式の完全な名称を記載；あて名は郵便番号及び国名も記載)

遠藤 博文 ENDO Hirofumi  
〒100-8185 日本国東京都千代田区大手町一丁目6番1号  
協和醸酵工業株式会社 本社内  
c/o Head Office, KYOWA HAKKO KOGYO CO., LTD.  
6-1, Ohtemachi 1-chome, Chiyoda-ku, Tokyo 100-8185 Japan

この欄に記載した者は  
次に該当する：

☐ 出願人のみである。  
☒ 出願人及び発明者である。  
☐ 発明者のみである。  
(ここに印を付したとき  
は、以下に記入しないこと)

国籍(国名)： 日本国 JP

住所(国名)： 日本国 JP

この欄に記載した者は、次の  
指定国についての出願人である：  
☐ すべての指定国 ☐ 米国を除くすべての指定国 ☒ 米国のみ ☐ 追記欄に記載した指定国

☒ その他の出願人又は発明者が続報に記載されている。

第 IV 欄 代理人又は普通の代表者、通知のあて名

次に記載された者は 国際機関において出願人のために行動する：

☐ 代理人 ☐ 普通の代表者

氏名(名称)及びあて名：(姓・名の順に記載；法人は公式の完全な名称を記載；あて名は郵便番号及び国名も記載)

電話番号：

ファクシミリ番号：

加入電信番号：

☐ 通知のためのあて名：代理人又は普通の代表者が選任されておらず、通知のために特に通知が送付されるあて名を記載して、る場合は、印刷を付す。

## 第III欄の続き その他の出願人又は発明者

この欄を使用しないときは、この用紙を願書に含めないこと。

氏名（名称）及びあて名：（姓・名の順に記載。法人は正式の完全な名称に記載。あて名は郵便番号及び国名も記載）

米谷 良之 YONETANI Yoshiyuki  
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c/o Tokyo Research Laboratories,  
KYOWA HAKKO KOGYO CO., LTD.  
6-6, Asahi-machi 3-chome, Machida-shi, Tokyo 194-8533  
Japan

この欄に記載した者は、次に該当する：

- ☐ 出願人のみである。  
☒ 出願人及び発明者である。  
☐ 発明者のみである。  
（ここに印を付したときは、以下に記入しないこと）

国籍（国名）： 日本国 JP

住所（国名）： 日本国 JP

この欄に記載した者は、次の

☐ すべての指定国☐ 米国を除くすべての指定国☒ 米国のみ☐ 追記欄に記載した指定国

指定国についての出願人である：（姓・名の順に記載。法人は正式の完全な名称を記載。あて名は郵便番号及び国名も記載）

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Japan

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☒ 出願人及び発明者である。  
☐ 発明者のみである。  
（ここに印を付したときは、以下に記入しないこと）

国籍（国名）： 日本国 JP

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この欄に記載した者は、次の

☐ すべての指定国☐ 米国を除くすべての指定国☐ 米国のみ☐ 追記欄に記載した指定国

指定国についての出願人である：（姓・名の順に記載。法人は正式の完全な名称を記載。あて名は郵便番号及び国名も記載）

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6-6, Asahi-machi 3-chome, Machida-shi, Tokyo 194-8533  
Japan

この欄に記載した者は、次に該当する：

- ☐ 出願人のみである。  
☒ 出願人及び発明者である。  
☐ 発明者のみである。  
（ここに印を付したときは、以下に記入しないこと）

国籍（国名）： 日本国 JP

住所（国名）： 日本国 JP

この欄に記載した者は、次の

☐ すべての指定国☐ 米国を除くすべての指定国☒ 米国のみ☐ 追記欄に記載した指定国

指定国についての出願人である：（姓・名の順に記載。法人は正式の完全な名称を記載。あて名は郵便番号及び国名も記載）

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この欄に記載した者は、次に該当する：

- ☐ 出願人のみである。  
☒ 出願人及び発明者である。  
☐ 発明者のみである。  
（ここに印を付したときは、以下に記入しないこと）

国籍（国名）： 日本国 JP

住所（国名）： 日本国 JP

この欄に記載した者は、次の

☐ すべての指定国☐ 米国を除くすべての指定国☒ 米国のみ☐ 追記欄に記載した指定国☐ その他出願人又は発明者が他の税関に記載されている。

## 第V欄 国の指定

規則 4.9 (a) の規定に基づき次の指定を行う (該当する□に印を付すこと。少なくとも1つの□に印を付すこと)。

## A 地域半島

- ☒ **AP** **ARIPO** 半島 : **GH** ガーナ Ghana, **GM** ガンビア Gambia, **KE** ケニア Kenya, **LS** レソト Lesotho, **NW** マラウィ Malawi, **SD** スーダン Sudan, **SL** シェラ・レオネ Sierra Leone, **SZ** スワジランド Swaziland, **UG** ウガンダ Uganda, **ZW** ゼンバウェ Zimbabwe, 及びハラレポコトコと特許協力条約の締結国である他の国
- ☒ **EA** **ユーラシア** 半島 : **AM** アルメニア Armenia, **AZ** アゼルバイジャン Azerbaijan, **BY** ベラルーシ Belarus, **KG** キルギス Kyrgyzstan, **KZ** カザフスタン Kazakhstan, **MD** モルドバ Republic of Moldova, **RU** ロシア Russian Federation, **TJ** タジキスタン Tajikistan, **TM** トルクメニスタン Turkmenistan, 及びユーラシア特許条約と特許協力条約の締結国である他の国
- ☒ **EP** **ヨーロッパ** 半島 : **AT** オーストリア Austria, **BE** ベルギー Belgium, **CH** and **LI** スイス及びリヒテンシュタイン Switzerland and Liechtenstein, **CY** キプロス Cyprus, **DE** ドイツ Germany, **DK** デンマーク Denmark, **ES** スペイン Spain, **FI** フィンランド Finland, **FR** フランス France, **GB** 英国 United Kingdom, **GR** ギリシャ Greece, **IE** アイルランド Ireland, **IT** イタリア Italy, **LU** ルクセンブルグ Luxembourg, **MC** モナコ Monaco, **NL** オランダ Netherlands, **PT** ポルトガル Portugal, **SE** スウェーデン Sweden, 及びヨーロッパ特許条約と特許協力条約の締結国である他の国
- ☒ **OA** **OAPI** 半島 : **BF** ブルキナ・ファソ Burkina Faso, **BJ** ベナン Benin, **CF** 中央アフリカ Central African Republic, **CG** コンゴ Congo, **CI** コートジボワール Côte d'Ivoire, **CM** カメルーン Cameroon, **GA** ガボン Gabon, **GN** ギニア Guinea, **GW** ギニア・ビサウ Guinea-Bissau, **ML** マリ Mali, **MR** モリタニア Mauritania, **NE** ニジェール Niger, **SN** セネガル Senegal, **TD** チャド Chad, **TG** トーゴ Togo, 及びアフリカ知的所有権機構のメンバー国と特許協力条約の締結国である他の国 (他の種属の保護又は取扱いを求める場合には点線の上に記載する)

## B 国内半島 (他の種属の保護又は取扱いを求める場合には点線の上に記載する)

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> <b>AE</b> アラブ首長国連邦 United Arab Emirates                              | <input checked="" type="checkbox"/> <b>LR</b> ライベリア Liberia   |
| <input checked="" type="checkbox"/> <b>AL</b> アルバニア Albania  | <input checked="" type="checkbox"/> <b>LS</b> レソト Lesotho   |
| <input checked="" type="checkbox"/> <b>AM</b> アルメニア Armenia  | <input checked="" type="checkbox"/> <b>LT</b> リトアニア Lithuania   |
| <input checked="" type="checkbox"/> <b>AT</b> オーストリア Austria   | <input checked="" type="checkbox"/> <b>LU</b> ルクセンブルグ Luxembourg  |
| <input checked="" type="checkbox"/> <b>AU</b> オーストラリア Australia  | <input checked="" type="checkbox"/> <b>LV</b> ラトヴィア Latvia  |
| <input checked="" type="checkbox"/> <b>AZ</b> アゼルバイジャン Azerbaijan  | <input checked="" type="checkbox"/> <b>MD</b> モルドバ Republic of Moldova                                    |
| <input checked="" type="checkbox"/> <b>BA</b> ボスニア・ヘルツェゴヴィナ Bosnia and Herzegovina                       | <input checked="" type="checkbox"/> <b>MG</b> マダガスカル Madagascar   |
| <input checked="" type="checkbox"/> <b>BB</b> バルバドス Barbados   | <input checked="" type="checkbox"/> <b>MK</b> マケドニア・ユーゴスラヴィア共和国 The former Yugoslav Republic of Macedonia |
| <input checked="" type="checkbox"/> <b>BG</b> ブルガリア Bulgaria   | <input checked="" type="checkbox"/> <b>MM</b> モンゴル Mongolia   |
| <input checked="" type="checkbox"/> <b>BR</b> ブラジル Brazil  | <input checked="" type="checkbox"/> <b>NW</b> マラウィ Malawi   |
| <input checked="" type="checkbox"/> <b>BY</b> ベラルーシ Belarus  | <input checked="" type="checkbox"/> <b>NX</b> メキシコ Mexico   |
| <input checked="" type="checkbox"/> <b>CA</b> カナダ Canada   | <input checked="" type="checkbox"/> <b>NO</b> ノルウェー Norway  |
| <input checked="" type="checkbox"/> <b>CH</b> and <b>LI</b> スイス及びリヒテンシュタイン Switzerland and Liechtenstein | <input checked="" type="checkbox"/> <b>NZ</b> ニューゼaland New Zealand                                       |
| <input checked="" type="checkbox"/> <b>CN</b> 中国 China   | <input checked="" type="checkbox"/> <b>PL</b> ポーランド Poland  |
| <input checked="" type="checkbox"/> <b>CU</b> キューバ Cuba  | <input checked="" type="checkbox"/> <b>PT</b> ポルトガル Portugal  |
| <input checked="" type="checkbox"/> <b>CZ</b> チェコ Czech Republic   | <input checked="" type="checkbox"/> <b>RO</b> ルーマニア Romania   |
| <input checked="" type="checkbox"/> <b>DE</b> ドイツ Germany  | <input checked="" type="checkbox"/> <b>RU</b> ロシア Russian Federation                                      |
| <input checked="" type="checkbox"/> <b>DK</b> デンマーク Denmark  | <input checked="" type="checkbox"/> <b>SD</b> スーダン Sudan  |
| <input checked="" type="checkbox"/> <b>EE</b> エストニア Estonia  | <input checked="" type="checkbox"/> <b>SE</b> スウェーデン Sweden   |
| <input checked="" type="checkbox"/> <b>ES</b> スペイン Spain   | <input checked="" type="checkbox"/> <b>SG</b> シンガポール Singapore  |
| <input checked="" type="checkbox"/> <b>FI</b> フィンランド Finland   | <input checked="" type="checkbox"/> <b>SI</b> スロベニア Slovenia  |
| <input checked="" type="checkbox"/> <b>GB</b> 英国 United Kingdom  | <input checked="" type="checkbox"/> <b>SK</b> スロバキア Slovakia  |
| <input checked="" type="checkbox"/> <b>GD</b> グレーナダ Grenada  | <input checked="" type="checkbox"/> <b>SL</b> シェラ・レオネ Sierra Leone  |
| <input checked="" type="checkbox"/> <b>GE</b> ジョージア Georgia  | <input checked="" type="checkbox"/> <b>TJ</b> タジキスタン Tajikistan   |
| <input checked="" type="checkbox"/> <b>GH</b> ガーナ Ghana  | <input checked="" type="checkbox"/> <b>TM</b> トルクメニスタン Turkmenistan                                       |
| <input checked="" type="checkbox"/> <b>GM</b> ガンビア Gambia  | <input checked="" type="checkbox"/> <b>TR</b> トルキー Turkey   |
| <input checked="" type="checkbox"/> <b>HR</b> クロアチア Croatia  | <input checked="" type="checkbox"/> <b>TT</b> トリニダード・トバゴ Trinidad and Tobago                              |
| <input checked="" type="checkbox"/> <b>HU</b> ハンガリー Hungary  | <input checked="" type="checkbox"/> <b>UA</b> ウクライナ Ukraine   |
| <input checked="" type="checkbox"/> <b>ID</b> インドネシア Indonesia   | <input checked="" type="checkbox"/> <b>UG</b> ウガンダ Uganda   |
| <input checked="" type="checkbox"/> <b>IL</b> イスラエル Israel   | <input checked="" type="checkbox"/> <b>US</b> 米国 United States of America                                 |
| <input checked="" type="checkbox"/> <b>IN</b> インド India  | <input checked="" type="checkbox"/> <b>UZ</b> ウズベキスタン Uzbekistan  |
| <input checked="" type="checkbox"/> <b>IS</b> アイслランド Iceland  | <input checked="" type="checkbox"/> <b>VN</b> ベトナム Viet Nam   |
| <input checked="" type="checkbox"/> <b>JP</b> 日本 Japan   | <input checked="" type="checkbox"/> <b>YU</b> ユーゴスラヴィア Yugoslavia   |
| <input checked="" type="checkbox"/> <b>KE</b> ケニア Kenya  | <input checked="" type="checkbox"/> <b>ZA</b> 南アフリカ共和国 South Africa                                       |
| <input checked="" type="checkbox"/> <b>KG</b> キルギス Kyrgyzstan  | <input checked="" type="checkbox"/> <b>ZW</b> ゼンバウェ Zimbabwe  |
| <input checked="" type="checkbox"/> <b>KP</b> 北朝鮮 Democratic People's Republic of Korea                  |   |
| <input checked="" type="checkbox"/> <b>KR</b> 韓国 Republic of Korea                                       |   |
| <input checked="" type="checkbox"/> <b>KZ</b> カザフスタン Kazakhstan  | <input checked="" type="checkbox"/> <b>CR</b> コスタリカ Costa Rica  |
| <input checked="" type="checkbox"/> <b>LC</b> セント・ルシア Saint Lucia  | <input checked="" type="checkbox"/> <b>DM</b> ドミニカ Dominica   |
| <input checked="" type="checkbox"/> <b>LK</b> スリランカ Sri Lanka  | <input checked="" type="checkbox"/> <b>TZ</b> タンザニア Tanzania  |

この□は、この様式の取得後に特許協力条約の締結国となった国を指定するためのものである

指定の撤消の宣言：出願人は、上記の指定に加えて、規則 4.9 (a) の規定に基づき、特許協力条約の下で認められる他の全ての国の指定を行う。ただし、この宣言から除く国の表示を通知時にし国は、指定から除かれる。出願人は、これらの通知される指定が確認を条件として、この国に優先日から15月が経過する前にその確認がなされる。指定は、この期間の経過時に、出願人によって取り下げられたものとみなされることを宣言する。指定の確認は、指定を特定する通知の提出と指定手続及び種別手続の開始からなる。この確認は、通知から15月以内に受理官庁へ提出しなければならない。

第VI欄 優先権主張

☐ 他の優先権の主張（先の出願）が追記欄に記載されている

先の出願日 (日、月、年)	先の出願番号	先の出願		
		国内出願：国名	広域出願：*広域官庁名	国際出願：受理官庁名
(1) 29.01.99	平成11年特許願 第21707号	日本国 JP		
(2)				
(3)				

☒ 上記( )の番号の先の出願（ただし、本国際出願が提出される受理官庁に対して提出されたものに限る）のうち、( )の番号のものについては、出願書類の認証書を作成し国際事務局へ送付することを、受理官庁（日本国特許庁の長官）に対して請求している。

(1)

\*先の出願が、A・B・Pの特許出願である場合には、その先の出願を行った工業所有権の保護のためのパリ条約加盟国の少なくとも1ヶ国を追記欄に表示しなければならない（規則4.10(b)(i)）。追記欄を参照。

第VII欄 国際調査機関の選択

国際調査機関（ISA）の選択

先の国際調査結果の利用希望：当該調査の照会（先の調査が、国際調査機関によって既に実施又は請求されている場合）

出願日（日、月、年）

出願番号

国名（又は広域官庁）

ISA / J P

第VIII欄 照会欄：出願書の書名

この国際出願の用紙の枚数は次のとおりである。

願書 ..... 4 枚  
明細書（配列表を除く） ..... 51 枚  
請求の範囲 ..... 10 枚  
要約書 ..... 1 枚  
図面 ..... 0 枚  
明細書の配列表 ..... 44 枚

合計 110 枚

この国際出願には、以下にチェックした書類が添付されている。

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> 手数料計算用紙                  | 5. <input type="checkbox"/> 優先権書類（上記第VI欄の( )の番号を記載する）  |
| <input checked="" type="checkbox"/> 納付する手数料に相当する特許<br>印紙を貼付した書面 | 6. <input type="checkbox"/> 国際出願の翻訳文（翻訳に使用した言語名を記載する）  |
| <input type="checkbox"/> 国際事務局の口座への振込みを<br>証明する書面               | 7. <input type="checkbox"/> 寄託した微生物又は他の生物材料に関する書面  |
| 2. <input type="checkbox"/> 別個の記名押印された委任状                       | 8. <input checked="" type="checkbox"/> スクリーンデータ又はアミノ酸配列表<br>（フレキシブルディスク）                     |
| 3. <input type="checkbox"/> 包括委任状の写し                            | 9. <input checked="" type="checkbox"/> その他（書名を詳細に記載する）<br>陳述書、フレキシブルディスクの記録形<br>式等の情報を記載した書面 |
| 4. <input type="checkbox"/> 記名押印（署名）の説明書                        |  |

要約書とともに提出する図面：

本国際出願の使用言語名：日本語

第IX欄 提出者の記名押印

各人の氏名（名称）を記載し、その次に押印する。

協和醸酵工業株式会社

米谷 良之

橋本 信一

遠藤 博文

溝口 寛

尾崎 明夫

1. 国際出願として提出された書類の実際の受理の日

受理官庁の署名欄

2. 図面

3. 国際出願として提出された書類を補充する書類又は図面であって

☐ 受理された

その後期間内に提出されたものの実際の受理の日（訂正日）

☐ 不足図面がある

4. 特許協会の条約第11条(2)に基づく必要な補充の期間内の受理の日

5. 出願人により特定された  
国際調査機関

ISA / J P

☐

調査手数料未払につき、国際調査機関に  
調査用紙を送付していない。

国際調査機関の署名欄

記録原本の受理の日

